A photograph of a sunset over a field. The sun is low on the horizon, creating a bright orange glow that fills the sky and reflects on the clouds. The foreground shows a dark, silhouetted field with some distant hills and a few trees. The text is overlaid in white, centered, and reads: Flying B Ranch, Flight Pen, Irrigation, By Joseph Peterson.

# Flying B Ranch Flight Pen Irrigation By Joseph Peterson

# Idaho's Weather

Rainfall			
June	July	Aug	Sept
2.84	1.66	1.15	1.62
High Temperature			
72	82	83	73

Average last frost- May 10th



# Soil and farming conditions

- Clay soils
- Wet, cool springs
- Warm dry summers
- A few springs in the pens
- This adds up to a short growing season without irrigation
- Lots of  $\text{NH}_3$ !





# Without water you get:



Poor germination, poor finishing and, in the end, poor birds.

# What is lack of cover costing?

- Picked unsaleable birds- up to 5%
- Reduced pen capacity- almost half
- Increased mortality- from lack of thermal cover at turn out and increased post kills

# What tools do we have now?

- Well producing 200-300 GPM
- 50 HP down hole irrigation pump
- Wheel line row crop irrigation system
- Terragator cannon irrigation system
- Aluminum irrigation pipe

**We tried with this and it was very labor intensive and ineffective.**

In summary, in order to use the Terrigators that would water only about 1/2 of the farm well, we would need to deepen the well or drill a new one with a capacity of at least 300GPM. With the equipment we have this is a labor intensive method that would work, but not well. The cost of a better well could be from \$5K up to \$25K depending on the depth needed to get the 300GPM minimum for the old system. The bid price is shocking, but is a complete automatic watering of 90% of the pens. This would be virtually no labor for watering after the initial installation. The 10% left out is the areas around the ends of the pens near the roads where the feeders are.

One team member @ \$3000 a month for the three months of watering is \$9000 a year plus the more complicated maintenance of the Terrigators compared to the fixed system is a start to looking at the cost benefit ratio. If the cover was 20% better on the farm with the fixed system I would have to take a shot in the dark as to what the increase of saleable birds would be. 5% of 40,000 birds is 2000 @ \$12 for \$24,000 worth extra birds out of the pen. We had 2000 extra birds left at the end of this year that were not saleable.

Any additional ways to look at it would be appreciated. There is a lot riding on this one.

Joseph Peterson  
Operations Manager  
Flying B Ranch

Contract total price is \$147,288.00. This includes the full installation of a combined underground delivery system and above ground sprinkler heads for the existing flight pens as discussed with Jeremy Ringer: 90+% coverage of areas to be watered, 3 expansion areas, and control system.

Payment will be as follows: 1/3 at signing of contract; 1/3 at approximately 50% completion; 1/3 upon completion. Work will commence as soon as possible to allow for placement of birds on the schedule provided by Mr. Ringer. This is with the understanding that all projects have unforeseen circumstances or occurrences which may effect scheduling.

Thank you for the opportunity to bid your project. We look forward to working with you.

Submitted by:

Kyle Smith, Umbrella Sprinkler Services

Accepted by:

Flying B Farms



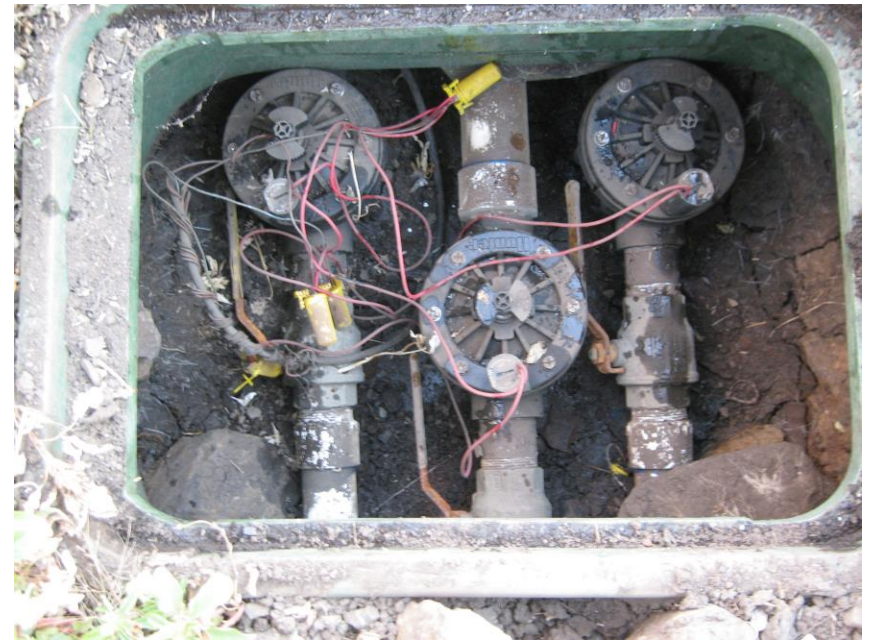
# We chose to go ahead and this is what we got- technology!



# How does it function?



# Main control and distribution hubs





# Program and Monitor



# There are various types of heads





# For various applications



# To cover the whole farm





# How effective has it been?



For the most part, very effective.





There is first batch out trouble  
( not related to irrigation)





# Farming still has to be good.



# Great things about the system



- Far reduced labor
- 24 hour a day use
- Ability to water right over birds at any age
- Zones programmable for time and management schedule
- Doesn't dampen feed

# Four year summary

- 2004-74K raised with 3500 tailless culls  
(no irrigation)
- 2005-84K raised with 2000 tailless culls  
(Terragator irrigation and management changes)
- 2006-87K raised with 700 tailless culls  
(New system with pen management changes)
- 2007-63K raised with 100 tailless culls  
(Fewer birds, irrigation and management changes)



# The bottom line for us.....



Thank you for your attention.  
Joseph Peterson

